

Reference Clock Frequency 1000 MHz

Example synthesis of 734.3133739 MHz, with 12 bit math/delay

Increment value = $(2^{12} \cdot 1000\text{MHz}/734.3133739\text{MHz}) - 2^{12}$

Increment Value = 1482

Falling Edge Accumulator Start Value = $(50\% \text{ of } (1000\text{MHz}/734.3133739\text{MHz}) \cdot 2^{12}) = 2789$

TABLE 1

Rising Edge				
Accumulator	Overflow bits	Base Accumulator	Equivalent Delay from Nearest Ref Edge (deg)	Total Effective Delay (deg)
0	0	0	0	0
1482	0	1482	130.25	490.25
2964	0	2964	260.51	980.51
4446	1	350	30.76	1470.76
1832	0	1832	161.02	1961.02
3314	0	3314	291.27	2451.27
4796	1	700	61.52	2941.52
2182	0	2182	191.78	3431.78
3664	0	3664	322.03	3922.03
5146	1	1050	92.29	4412.29
2532	0	2532	222.54	4902.54
4014	0	4014	352.79	5392.79
5496	1	1400	123.05	5883.05
2882	0	2882	253.3	6373.3
4364	1	268	23.55	6863.55
1750	0	1750	153.81	7353.81
3232	0	3232	284.06	7844.06
4714	1	618	54.32	8334.32
2100	0	2100	184.57	8824.57
3582	0	3582	314.82	9314.82
5064	1	968	85.08	9805.08
2450	0	2450	215.33	10295.33
3932	0	3932	345.59	10785.59
5414	1	1318	115.84	11275.84
2800	0	2800	246.09	11766.09
4282	1	186	16.35	12256.35
1668	0	1668	146.6	12746.6

Falling Edge				
Accumulator	Overflow bits	Base Accumulator	Equivalent Delay from Nearest Ref Edge (deg)	Total Effective Delay (deg)
2789	0	2789	245.13	245.13
4271	1	175	15.38	735.38
1657	0	1657	145.63	1225.63
3139	0	3139	275.89	1715.89
4621	1	525	46.14	2206.14
2007	0	2007	176.4	2696.4
3489	0	3489	306.65	3186.65
4971	1	875	76.9	3676.9
2357	0	2357	207.16	4167.16
3839	0	3839	337.41	4657.41
5321	1	1225	107.67	5147.67
2707	0	2707	237.92	5637.92
4189	1	93	8.17	6128.17
1575	0	1575	138.43	6618.43
3057	0	3057	268.68	7108.68
4539	1	443	38.94	7598.94
1925	0	1925	169.19	8089.19
3407	0	3407	299.44	8579.44
4889	1	793	69.7	9069.7
2275	0	2275	199.95	9559.95
3757	0	3757	330.21	10050.21
5239	1	1143	100.46	10540.46
2625	0	2625	230.71	11030.71
4107	1	11	0.97	11520.97
1493	0	1493	131.22	12011.22
2975	0	2975	261.47	12501.47
4457	1	361	31.73	12991.73